

**TECHNOLOGY NEEDS/OPPORTUNITIES STATEMENT  
REMEDATION OF HEXONE TANKS FOR THE S&M PROGRAM**

**Identification No.:** RL-DD086

**Date:** August 2001

**Program:** Surveillance and Maintenance

**OPS Office/Site:** Richland Operations Office/ Hanford Site

**PBS No.:** RL-CP01

**Waste Stream:** N/A

**TSD Title:** N/A

**Waste Management Unit (if applicable):** N/A

**Facility:** 212-N

**Priority Rating:** This entry addresses the Accelerated Cleanup: Paths to Closure (ACPC) Priority:

- \_\_\_\_\_ 1. Critical to the success of the Accelerated Cleanup: Paths to Closure (ACPC)
- \_\_\_\_\_ 2. Provides substantial benefit to the ACPC projects (e.g., moderate to high lifecycle cost savings or risk reduction, increased likelihood of compliance, increased assurance to avoid schedule delays)
- X   3. Provides opportunities for significant, but lower cost savings or risk reduction, and may reduce uncertainty in ACPC project success.

**Need Title:** Remediation Of Hexone Tanks For The S&M Program.

**Need/Opportunity Category:** *Technology opportunity* - the project desires an alternative to the current or planned baseline technology/process (i.e., a baseline exists but can be improved).

**Need Description:** There are two horizontal underground hexone tanks that are planned for remediation by the end of March 2002.

**Schedule Requirements:**

Earliest Date Required: 10/1/2001

Latest Date Required: 3/31/2002.

**Problem Description:** There are two buried hexone tanks (236-S, Tanks 141 and 142) that need to be remediated. The tanks are 26 feet long and eleven and a half feet in diameter. There is four feet of overburden. The entry points are a 4-inch diameter pipe roughly 10 feet from the end of each of the tanks and a manhole access toward the opposite end of each tank. The tanks contain approximately 250 gallons of sludge composed primarily of hexone. Hexone is explosive. An inert environment of less than 11% oxygen is maintained for both tanks.

**Benefit to the Project Baseline of Filling Need:** Potential for cost savings.

**Functional Performance Requirements:** The technologies must be able to immobilize the hexone sludge and fill the void space in the tanks. The material used must not deteriorate over

time and must be able to support heavy equipment. The technology must use the available entry points into the tanks.

**WBS No.**  
1.4.03.3.1.02.05.03

**TIP No.**  
N/A

**Relevant PBS Milestone:** PBS-MC-030

***Justification for Need:***

**Technical:** Remediation of the hexone tanks to decrease the potential for an environmental release.

**Regulatory:** There are no specific regulatory drivers for this need.

**Environmental Safety & Health:** Tank remediation will result in reduced risk of an environmental release and increased worker safety.

**Cost Savings Potential (Mortgage Reduction):** Rough order of magnitude (ROM) life cycle cost (LCC) savings is \$20K. LCC savings estimate is based on the assumption that 10% of the total interim stabilization costs could be saved and that the projected costs for stabilization is estimated as \$187K (BHI-01521 Draft B).

**Cultural/Stakeholder Concerns:** Remediation will result in reduced risk of an environmental release.

**Other:** None identified.

**Current Baseline Technology:** Low density grout is planned.

**End User:** Environmental Restoration Project

***Site Technical Point-of-Contact:***

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